

DP-300317

IN THE CLAIMS

1. (Previously Presented) A catalyzed adsorber for treating exhaust gas, comprising:
 - a substrate;
 - a zeolite underlayer disposed over the substrate; and
 - a catalyst overlayer disposed over the underlayer, wherein the overlayer is zeolite free, wherein an overlayer non-catalyst loading is less than about 1.0 g/in³, and wherein an overlayer catalyst loading is about 0.1 to about 0.5 g/in³.
2. (Original) The catalyzed adsorber of Claim 1, wherein the substrate is a cordierite monolith material.
3. (Previously Presented) The catalyzed adsorber of Claim 1 wherein the overlayer has a thickness less than about 30 microns.
4. (Original) The catalyzed adsorber of Claim 1, wherein the underlayer further comprises an inorganic oxide.
5. (Original) The catalyzed adsorber of Claim 4, wherein the inorganic oxide is alumina.
6. (Previously Presented) The catalyzed adsorber of Claim 1, wherein the overlayer non-catalyst loading is about 0.8 to about 1.0 g/in³.
7. (Original) The catalyzed adsorber of Claim 6, wherein the overlayer non-catalyst loading is about 0.9 to about 1.0 g/in³.
8. (Cancelled)

DP-300317

9. (Previously Presented) The catalyzed adsorber of Claim 8, wherein the overlayer has a catalyst loading of about 0.1 to about 0.25 g/in³.

10. (Previously Presented) The catalyzed adsorber of Claim 1, wherein the overlayer has a catalyst loading of about 0.1 to about 0.2 g/in³.

11. (Previously Presented) The catalyzed adsorber of Claim 1, wherein the catalyst is selected from the group consisting of palladium, platinum, rhodium, and mixtures and alloys comprising at least one of the foregoing catalysts.

12. (Original) The catalyzed adsorber of Claim 1, wherein the overlayer comprises less than about 3% zeolite.

13. (Previously Presented) The catalyzed adsorber of Claim 12, wherein the zeolite is a faujasite.

14. (Previously Presented) The catalyzed adsorber of Claim 13, wherein the faujasite has a Si/Al ratio of about 3.0 to about 10.

15. (Original) The catalyzed adsorber of Claim 1, wherein the overlayer further comprises an inorganic oxide.

16. (Original) The catalyzed adsorber of Claim 15, wherein the inorganic oxide is selected from the group consisting of alumina, silica, titania, magnesia, zirconia, beryllia, ceria, lanthana, zirconia, and compounds and mixtures comprising at least one of the foregoing inorganic oxides.

17. (Original) The catalyzed adsorber of Claim 16, wherein the inorganic oxide is selected from the group consisting of delta phase alumina, gamma phase alumina, and combinations comprising at least one of the foregoing inorganic oxides.

DP-300317

18. (Original) The catalyzed adsorber of Claim 17, wherein the inorganic oxide is lanthanum stabilized gamma phase alumina.

19. (Previously Presented) A method for making a catalyzed adsorber system for treating exhaust gas, comprising:

providing a substrate;
disposing a zeolite underlayer over the substrate; and
disposing a catalyst overlayer over the underlayer, wherein the overlayer is zeolite free, wherein an overlayer non-catalyst loading is less than about 1.0 g/in³, and wherein an overlayer catalyst loading is about 0.1 to about 0.5 g/in³.

20. (Previously Presented) The method for making the catalyzed adsorber as in Claim 19, wherein the overlayer non-catalyst loading is about 0.8 to about 1.0 g/in³.

21. (Original) The method for making the catalyzed adsorber as in Claim 20, wherein the overlayer non-catalyst loading is about 0.9 to about 1.0 g/in³.

22. (Cancelled)

23. (Previously Presented) The method for making the catalyzed adsorber as in Claim 22, wherein the overlayer has a catalyst loading of about 0.1 to about 0.25 g/in³.

24. (Previously Presented) The method for making the catalyzed adsorber as in Claim 19, wherein the overlayer has a catalyst loading of about 0.1 to about 0.2 g/in³.

25. (Previously Presented) The method for making the catalyzed adsorber as in Claim 19, wherein the catalyst is selected from the group consisting of palladium, platinum, rhodium, and mixtures and alloys comprising at least one of the foregoing catalysts.

DP-300317

26. (Original) The method for making the catalyzed adsorber as in Claim 19, wherein the overlayer comprises less than about 3% zeolite.

27. (Previously Presented) The method for making the catalyzed adsorber as in Claim 19, wherein the zeolite is a faujasite.

28. (Original) The method for making the catalyzed adsorber as in Claim 19, wherein the overlayer further comprises an inorganic oxide.

29. (Original) The method for making the catalyzed adsorber as in Claim 28, wherein the inorganic oxide is selected from the group consisting of alumina, silica, titania, magnesia, zirconia, beryllia, ceria, lanthana, zirconia, and compounds and mixtures comprising at least one of the foregoing inorganic oxides.

30. (Original) The method for making the catalyzed adsorber as in Claim 29, wherein the inorganic oxide is selected from the group consisting of delta phase alumina, gamma phase alumina, and combinations comprising at least one of the foregoing inorganic oxides.

31. (Original) The method for making the catalyzed adsorber as in Claim 30, wherein the inorganic oxide is lanthanum stabilized gamma phase alumina.

32-33 (Cancelled)

34. (Previously Presented) The catalyzed adsorber of Claim 1, wherein the zeolite has a sodium content of less than 0.1 wt.% of the total weight of the zeolite.

35. (Previously Presented) The method of Claim 19, wherein the zeolite has a sodium content of less than 0.1 wt.% of the total weight of the zeolite.

DP-300317

36. (Previously Presented) A catalyzed adsorber for treating exhaust gas, comprising:
a substrate;
a zeolite underlayer disposed over the substrate, wherein the zeolite has a sodium content of less than 0.1 wt.% of the total weight of the zeolite; and
a catalyst overlayer disposed over the underlayer, wherein the overlayer is zeolite free, and wherein an overlayer non-catalyst loading is less than about 1.0 g/in³.

37. (Previously Presented) The catalyzed adsorber of Claim 36, wherein the overlayer non-catalyst loading is about 0.8 to about 1.0 g/in³.

38. (Previously Presented) The catalyzed adsorber of Claim 36, wherein the overlayer non-catalyst loading is about 0.9 to about 1.0 g/in³.

39. (Previously Presented) The catalyzed adsorber of Claim 36, wherein the catalyst is selected from the group consisting of palladium, platinum, rhodium, and mixtures and alloys comprising at least one of the foregoing catalysts.

40. (Previously Presented) The catalyzed adsorber of Claim 36, wherein the zeolite is a faujasite.

41. (Currently Amended) The catalyzed adsorber of Claim 40[[36]], wherein the faujasite has a Si/Al ratio of about 3.0 to about 10.

42. (Previously Presented) The catalyzed adsorber of Claim 36, wherein the overlayer further comprises an inorganic oxide.

43. (New) The catalyzed adsorber of Claim 36, wherein the underlayer is noble metal free.

DP-300317

44. (New) The catalyzed adsorber of Claim 1, wherein the underlayer is noble metal free.

45. (New) The method of Claim 19, wherein the underlayer is noble metal free.

46. (New) The catalyzed adsorber of Claim 34, wherein the zeolite is a faujasite having a Si/Al ratio of about 3.0 to about 10.

47. (New) The method of Claim 35, wherein the zeolite is a faujasite having a Si/Al ratio of about 3.0 to about 10.